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UNITED STATES DEPARTMENT OF AGRICULTURE

U.S. BUREAU OF PLANT INDUSTRY

Division of Cereal Crops and Diseases

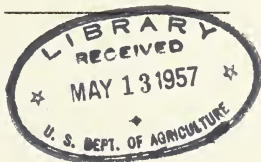
and

The Agricultural Experiment Stations
of Illinois, North Carolina, and Purdue

University (Indiana)

cooperating

REACTION OF WHEAT VARIETIES, SELECTIONS, AND HYBRIDS
TO MOSAIC AND MOSAIC-ROSETTE //



See
Washington, D. C.

May 24, 1935 //

UNITED STATES DEPARTMENT OF AGRICULTURE
Bureau of Plant Industry

REACTION OF WHEAT VARIETIES, SELECTIONS, AND HYBRIDS
TO MOSAIC AND MOSAIC-ROSETTE

Tests Conducted Cooperatively with the Agricultural Experiment Stations
of Illinois, North Carolina, and Purdue University (Indiana)

By H. H. McKinney, Senior Pathologist, Division of Cereal Crops and Diseases

INTRODUCTION

No data on the resistance and susceptibility of wheats to rosette have been published since 1923. Since that time field tests have been conducted with additional varieties, selections, and hybrids.

The results of controlled experimental work indicate that at least two distinct viruses are involved in the wheat mosaic which occurs east of the Mississippi River and there is reason to believe these are usually found together. One of these viruses induces a green mosaic and rosette on Harvest Queen wheat, whereas on certain other varieties this virus induces a green mosaic or a yellow mosaic, depending on the variety and the environmental conditions. The second virus does not induce rosette in any variety, so far as known, but it induces a severe yellow mosaic on suitable differential varieties.

METHODS

The tests were conducted in the field. All sowings, including the spring varieties, were made in the autumn in soil on which mosaic wheat had grown previously. At the Arlington Experiment Farm, Rosslyn, Va., the infested soils used were shipped from the infested areas near Granite City, Illinois, and near Wanatah, Indiana. The slight mosaic infestation which occurs naturally at the Arlington Farm was controlled by disinfecting the soil in all plots with formalin before introducing the soil from Illinois and Indiana.

Each variety, selection, or hybrid was usually sown in a single row but in some cases more rows were sown. In the early tests the rows were 1 rod long, but in later tests it was found that rows 4 feet long were satisfactory in heavily infested soil.

Harvest Queen wheat known to be highly susceptible to mosaic-rosette was sown at the beginning and in every tenth row throughout a nursery to serve as a control for soil infestation. In later tests Nittany or Red Winter spelt were also used as controls, as these are highly susceptible to yellow mosaic. The data for the controls are recorded in two figures, the first representing the lowest and the second the highest percentage of plants infected in the several rows in each experiment.

In the earlier reports of field tests only the rosette symptoms were considered but in this report mosaic is also given consideration, and an attempt is made to distinguish roughly between yellow and green-mosaic symptoms. At best, however, it was found impracticable to attempt more than a rough segregation of the symptom expressions in the field.

The capital letter "T" in the data columns denotes a trace or less than 1 per cent of disease. The plus signs in the data columns for 1924-25 at Granite City indicate the presence of mosaic mottling. Owing to injury caused by a grass fire in an adjoining field and by a severe winter it was not feasible to express these data in percentages. The abbreviations "Gr. Mos. and Yel. Mos." stand for green mosaic and yellow mosaic, respectively.

PERSONNEL

Seed was supplied by C. E. Leighty, formerly in charge of eastern wheat and rye investigations, in the Division of Cereal Crops and Diseases, by John E. Parker, of the Kansas Agricultural Experiment Station, and by workers in the cooperating agricultural experiment stations.

Sowings were made and data were obtained in Illinois by Benjamin Koehler, Department of Agronomy, Illinois Agricultural Experiment Station, R. W. Webb, formerly in the Division of Cereal Crops and Diseases, and the writer; in Indiana by J. B. Keadrick, formerly in the Department of Botany, Purdue University Agricultural Experiment Station, R. W. Webb, and the writer; in North Carolina by S. G. Lehman, Department of Botany, North Carolina Agricultural Experiment Station, and the writer; and in Virginia by the writer and assistants. C. E. Leighty assisted in the tabular arrangement of the varieties and in the editing.

REMARKS

It is not the purpose of this report to recommend varieties; however, it should be pointed out that varieties which express green mosaic but which do not express rosette seldom if ever show appreciable damage that can be attributed to the disease. Certain strains of Fulcaster and of Fultz serve as examples.

Varieties expressing high percentages of rosette show much injury, followed by a low yield or a complete loss of the crop.

Yellow mosaic frequently induces severe injury, followed by a greatly reduced crop or no crop at all. Varieties showing high percentages of yellow mosaic should be avoided.

In old established varieties there are many selections and local strains which differ in their reaction to mosaic. This is illustrated in the data presented for Fulcaster, Fultz, and Red May. Some of the strains may carry the name of the established variety, whereas others may carry new names. In making recommendations this should be kept in mind in order to avoid misunderstandings with growers.

Note: These data are not to be published without the consent of the cooperating agencies.

Reaction of wheat varieties, selections, and hybrids to mosaic and mosaic-rosette

Class, Varieties, Selections and Hybrids	I.C.	Selection No.	Greene City, Illinois												Lexington, North Carolina												Roanoke, Virginia											
			1922-23			1923-24			1924-25			1925-26			1926-27			1927-28			1928-29			1929-30			1930-31			1931-32			1932-33					
			Mo.	Sts.	Gr.	Mo.	Sts.	Gr.	Mo.	Sts.	Gr.	Mo.	Sts.	Gr.	Mo.	Sts.	Gr.	Mo.	Sts.	Gr.	Mo.	Sts.	Gr.	Mo.	Sts.	Gr.	Mo.	Sts.	Gr.	Mo.	Sts.	Gr.	Mo.	Sts.	Gr.			
			Mo.	Sts.	Gr.	Mo.	Sts.	Gr.	Mo.	Sts.	Gr.	Mo.	Sts.	Gr.	Mo.	Sts.	Gr.	Mo.	Sts.	Gr.	Mo.	Sts.	Gr.	Mo.	Sts.	Gr.	Mo.	Sts.	Gr.	Mo.	Sts.	Gr.	Mo.	Sts.	Gr.			
SOFT RED HINDER VARIETIES																																						
Illini Chief		(Selection)	-	-	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Illini Chief	9406		-	-	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Illini Chief	5946		-	-	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Illini Chief	6947		-	-	-	98	98	98	30	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Illinois Progeny No. 54		(Ill. Sta.)	-	-	-	-	-	-	-	-	-	10	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Superior Amber	3447		-	-	-	-	-	-	96	96	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Indiana Swamp	4544		-	-	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Jones Pile	1946		0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Jones Pile	6177		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Jones Pile (Super)	5944		-	-	-	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Kawale (semi-hard)		Webb. Sta. No. 371	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Kawale	6180		-	-	-	-	-	-	85	85	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Kawale	5615		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Leap		S.W.R. 303	-	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Leap	1929	Swan. No. 257	-	-	-	-	-	-	0	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Leap	1930	Swan. No. 259	-	-	-	-	-	-	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Leap		Swan. No. 259	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Leap		Swan. No. 259	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Leap		Swan. No. 259	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Leap		Swan. No. 259	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Leap		Swan. No. 259	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
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Leap		Swan. No. 259	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
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Leap		Swan. No. 259	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
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Reaction of wheat varieties, selections, and hybrids to mosaic and mosaic-roseette

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Reaction of wheat varieties, selections, and hybrids to mosaic and mosaic-roots

Class, Varieties, Selections, Hybrids	C.I. No.	Selection No., State No., or source	Granite City, Illinois										Lexington, North Carolina										Roanoke, Virginia																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
			1922-23					1924-25					1930-31					1931-32					1927-28					1928-29					1930-31					1931-32					1932-33					1933-34																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
			Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos	Row	Mos

Reaction of wheat varieties, selections, and hybrids to mosaic and mosaic-roseette

		Rosslyn, Virginia															
Class, Varieties, Selections and Hybrids	C.I. No.	Selection No., State No., or source	1926-27			1927-28			1928-29			1929-30			1930-31		
			Ros-	Gr.	Yel.	Ros-	Gr.	Yel.	Ros-	Gr.	Yel.	Ros-	Gr.	Yel.	Ros-	Gr.	Yel.
			ette	Mos.	Mos.	ette	Mos.	Mos.	ette	Mos.	Mos.	ette	Mos.	Mos.	ette	Mos.	Mos.
<u>HARD RED SPRING VARIETIES</u>			%	%	%	%	%	%	%	%	%	%	%	%	%	%	
			-	-	-	-	-	-	0	0	T	-	-	-	-	-	
Haynes Bluestem		(Minn. Sta.)	0	T	0	0	5	0	0	0	100	-	-	-	-	-	
Marquis			-	-	-	-	-	-	0	0	100	0	0	100	0	0	
Marquis	3641		-	-	-	-	-	-	0	0	100	0	0	100	0	0	
<u>DURUM VARIETIES</u>																	
Marouani	1593		-	-	-	-	-	-	0	0	100	-	-	-	-	-	
Minidum	5296		-	-	-	-	-	-	0	0	25	-	-	-	-	-	
Pentad	3322		-	-	-	-	-	-	0	0	50	-	-	-	-	-	
<u>WHITE SPRING VARIETIES</u>																	
<u>Common</u>																	
Federation	4734		-	-	-	-	-	-	0	0	75	-	-	-	-	-	
Hard Federation	4980		-	-	-	-	-	-	0	0	10	-	-	-	-	-	
Sonora	3036		-	-	-	-	-	-	0	100	0	-	-	-	-	-	
<u>CLUB</u>																	
Coppel	3088		0	0	0	0	5	0	-	-	-	-	-	-	-	-	
Hybrid 60	5024		0	0	0	0	5	0	0	0	T	-	-	-	-	-	
Hybrid 128	4512		0	T	0	0	75	0	-	-	-	-	-	-	-	-	
Harvest Queen (control)		Edwardsville, Ill.	100	100	T	100	100	T	50-100	50-100	T	70-100	70-100	T	65-100	65-100	
Wittany (control)	6882		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Red Winter spelt (control)	1772		0	25	75	0	25	75	-	-	-	0	30-34	35-50	60-64	0	
															20-25	60-75	

[illegible]

Reaction of wheat varieties, selections, and hybrids to mosaic and mosaic-rosette

Class, Varieties, Selections and Hybrids	Source of Seed	Reaction of wheat varieties, selections, and hybrids to mosaic and mosaic-rosette															
		Wanatah, Ind.				Granite City, Illinois								Lexington, North Carolina			
		1922-23		1922-23		1929-30		1930-31		1930-31		1931-32		1931-32		1931-32	
		Ros- ette	Mos- aic	Ros- ette	Mos- aic	Ros- ette	Gr. Mos.	Yel. Mos.	Ros- ette	Gr. Mos.	Yel. Mos.	Ros- ette	Gr. Mos.	Yel. Mos.	Ros- ette	Gr. Mos.	Yel. Mos.
SELECTIONS FROM HYBRIDS AND VARIETIES		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Sel. in Rising Sun	Swan. 1929 RR 140	-	-	-	-	0	0	100	-	-	-	-	-	-	-	-	-
Rising Sun Hybrid X Purplestrow G20-1		-	-	-	-	-	-	-	0	0	100	0	0	100	0	0	100
Selection 131218	Arl. 1919 No. 131218	0	0	0	60	-	-	-	-	-	-	-	-	-	-	-	-
Selection (common) 1593	From wheat breeding nursery, Arl. Exp. Farm	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-
Selection (from 4131)	" " " " " " "	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
Selection 131098	" " " " " " "	-	-	0	27	-	-	-	-	-	-	-	-	-	-	-	-
Selection 131156	" " " " " " "	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
Selection Row 353 in 1918	" " " " " " "	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
Selection Row 408 in 1918	" " " " " " "	-	-	0	60	-	-	-	-	-	-	-	-	-	-	-	-
Texas 3015-106		-	-	-	-	0	0	98	-	-	-	-	-	-	-	-	-
Texas 3015-63		-	-	-	-	0	0	100	-	-	-	-	-	-	-	-	-
Texas 3015-28		-	-	-	-	0	95	0	-	-	-	-	-	-	-	-	-
Texas 3015-4		-	-	-	-	0	3	0	-	-	-	-	-	-	-	-	-
Texas Sel. No. 3015-105-4		-	-	-	-	-	-	-	0	100	0	-	-	-	-	-	-
Turkey Sel. Colby	C.I. 6152 Kan. No. 2466	-	-	-	-	-	-	-	0	100	0	-	-	-	-	-	-
Harvest Queen (control)	Edwardsville, Illinois	T-75	T-75	85-99	85-99	99-100	99-100	0	50-98	50-98	0	30-100	30-100	0	5-100	5-100	5-100
Wittary (control)	C. I. 6882	-	-	-	-	0	25-50	25-50	0	48-50	48-50	0	5-50	5-50	-	-	-
Red Winter spelt (control)	C. I. 1772	-	-	-	-	0	25	75	-	-	-	-	-	-	0	25-35	50-65

Notes:

During the past two seasons the following wheats have been found to be extremely susceptible to mosaic or to mosaic-rosette in commercial fields in Illinois and Indiana:

Hardy Pulte	mosaic-rosette	Mason county, Ill.
Illinois Progeny No. 2	mosaic	Logan, Mason, and Tazewell counties, Ill.
Michigan Amber (Red May)	mosaic	Huntington county, Ind.
Perfection (Currell)	mosaic	Huntington county, Ind.
Purkof	mosaic	Logan, Edgar, and Clark counties, Ill.
Winter Fife	mosaic-rosette	Mason county, Ill.

